



US 20120164205A1

(19) United States

(12) Patent Application Publication

Baum et al.

(10) Pub. No.: US 2012/0164205 A1

(43) Pub. Date: Jun. 28, 2012

## (54) COMPOSITIONS AND METHODS FOR CONTROL OF INSECT INFESTATIONS IN PLANTS

(76) Inventors: **James A. Baum**, Webster Groves, MO (US); **Larry A. Gilbertson**, Chesterfield, MO (US); **David K. Kovalic**, Clayton, MO (US); **Thomas J. LaRosa**, Fenton, MO (US); **Maolong Lu**, Hillsborough, NJ (US); **Tichafa R. I. Munyikwa**, Ballwin, MO (US); **James K. Roberts**, Chesterfield, MO (US); **Wei Wu**, Chesterfield, MO (US); **Bei Zhang**, Chesterfield, MO (US)

(21) Appl. No.: 13/226,353

(22) Filed: Sep. 6, 2011

## Related U.S. Application Data

- (63) Continuation of application No. 11/547,764, filed on Apr. 21, 2009, filed as application No. PCT/US05/11816 on Apr. 8, 2005.
- (60) Provisional application No. 60/560,842, filed on Apr. 9, 2004, provisional application No. 60/565,632, filed on Apr. 27, 2004, provisional application No. 60/579,062, filed on Jun. 11, 2004, provisional application No. 60/603,421, filed on Aug. 20, 2004, provisional application No. 60/617,261, filed on Oct. 11, 2004, provisional application No. 60/669,175, filed on Apr. 7, 2005.

## Publication Classification

## (51) Int. Cl.

A01N 25/08	(2006.01)
C12N 1/21	(2006.01)
C12N 1/15	(2006.01)
A01P 7/04	(2006.01)
A01N 63/00	(2006.01)
A01N 63/04	(2006.01)
A01N 37/18	(2006.01)
A01N 57/16	(2006.01)
C12N 15/113	(2010.01)
C12N 1/19	(2006.01)

(52) U.S. Cl. ..... 424/409; 536/24.5; 435/252.33; 435/252.3; 435/252.2; 435/252.34; 435/252.31; 435/252.35; 435/254.11; 435/254.21; 435/254.2; 424/93.2; 424/93.21; 514/4.5; 514/44 A

## ABSTRACT

The present invention is directed to controlling pest infestation by inhibiting one or more biological functions in an invertebrate pest. The invention discloses methods and compositions for use in controlling pest infestation by feeding one or more different recombinant double stranded RNA molecules to the pest in order to achieve a reduction in pest infestation through suppression of gene expression. The invention is also directed to methods for making transgenic plants that express the double stranded RNA molecules, and to particular combinations of transgenic pesticidal agents for use in protecting plants from pest infestation.